



**Northern New Mexico Citizens' Advisory Board Meeting  
November 18, 2009  
1:00 p.m. to 8:00 p.m.  
Holiday Inn, 4048 Cerrillos Road  
Santa Fe, New Mexico  
MINUTES**

**Attending:**

**NNMCAB Members-**

- 1. Ralph Phelps, NNMCAB Chair**
- 2. Robert Gallegos, NNMCAB Vice Chair**
- 3. Pam Henline, EMSR Committee Chair**
- 4. Gerry Maestas, WM Committee Chair**
- 5. Mike Loya, WM Committee Vice Chair**
- 6. Peter Baston**
- 7. J.D. Campbell**
- 8. Jacquelyn Gutierrez**
- 9. Pamela Gilchrist**
- 10. Lawrence Longacre**
- 11. Caroline Mason**
- 12. Manuel Pacheco**
- 13. Bob Villarreal**

**Excused Absences-**

- 1. Robert Misener**
- 2. Deb Shaw, EMSR Committee Vice Chair**

**Marked Absent-**

- 1. Matt Madrid**
- 2. Paul Martinez**

**NNMCAB Staff-**

- Menice Santistevan, Executive Director**  
**Lorelei Novak, Technical Programs and Outreach**  
**Grace Roybal, Office Administrator**  
**Edward Roybal, Sound Technician**

**Also in Attendance-**

- Lee Bishop, Co-Deputy Designated Federal Officer (DDFO)**  
**Ed Worth, Co- Deputy Designated Federal Officer (DDFO)**  
**Michael Graham, LANS**  
**George Rael, DOE**

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- Guests-**
- Fred deSousa, LANS**
- Sandra Roybal, LASO-EPO**
- Bob Gilkeson, Public**
- Danny Katzman, LANL**
- Ken LaGattuta, Public**
- Sarah Wolters, New Mexico Community Foundation (NMCF)**
- David Gregory, DOE-NNSA**
- Tori George, LANS**
- Scott Kovac, Nuclear Watch New Mexico (NWNM)**

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**AGENDA**

- I. Call to Order**
- II. Establishment of Quorum (10 needed)**
  - a. Roll Call**
  - b. Excused Absences**
- III. Welcome and Introductions**
- IV. Approval of Agenda**
- V. Approval of Minutes of September 30, 2009**
- VI. Old Business**
  - a. Written Reports**
  - b. Other Items**
- VII. New Business**
  - a. Matters from Deputy Designated Federal Officers**
  - b. Consideration and Action on NNMCAB Annual Evaluation Report**
- VIII. Open Forum for Members**
- IX. Presentation - LANL Groundwater Monitoring System (Existing and New Wells) with Danny Katzman**
- X. Public Comment Period**
- XI. Presentation on Remote Handled 33 Shafts at Area G Robert Villarreal**
- XII. End of Year Report with Michael Graham (LANS)**
- XIII. Meeting Feedback**
- XIV. Adjournment**

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2 **MINUTES**

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4 **I. Call to Order, Introductions**

5 The regular bi-monthly meeting of the Northern New Mexico Citizens' Advisory Board  
6 (NNMCAB or CAB) meeting was held on November 18, 2009 at the Holiday Inn, 4048 Cerrillos  
7 Road in Santa Fe, New Mexico. The Chair, Ralph Phelps presided. Ed Worth, Co-Deputy  
8 Designated Federal Officer (DDFO) stated that on behalf of the Department of Energy (DOE),  
9 the regular bi-monthly meeting of the NNMCAB was called to order at 1:00 p.m. The regular  
10 meeting of the NNMCAB was open to the public and posted in ***The Federal Register*** in  
11 accordance with ***The Federal Advisory Committee Act***.  
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14 **II. Establishment of Quorum (12 needed)**

15 **a. Roll Call**

16 Ms. Novak conducted roll call as the members arrived. Ms. Gutierrez, Mr. Maestas and  
17 Mr. Loya arrived after the meeting was called to order, which made a total of 13 members  
18 present.

19 **b. Excused Absences**

20 Mr. Casalina, DOE Federal Coordinator had previously approved excused absences for Mr.  
21 Robert Misener and Dr. Deb Shaw. Mr. Matt Madrid and Mr. Paul Martinez were marked absent.  
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24 **III. Welcome and Introductions**

25 Mr. Ralph Phelps, NNMCAB Chair, provided meeting introductions and asked the  
26 members to provide a round robin introduction.  
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29 **IV. Approval of Agenda**

30 The Board reviewed the November 18, 2009 CAB meeting agenda. **Ms. Henline made**  
31 **a motion to approve the agenda as presented and Mr. Baston seconded the motion.**  
32 **The meeting agenda was approved.**  
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35 **V. Approval of Minutes of September 30, 2009**

36 The Board reviewed the minutes from the September 30, 2009 CAB meeting. By ongoing  
37 instructions from DOE Headquarters, the minutes were previously reviewed and certified by the  
38 NNMCAB Chair. The minutes were distributed in the mailed meeting packet and were presented  
39 at the meeting for Board approval.

40 **Mr. Baston made a motion to approve the minutes as presented and Dr.**  
41 **Campbell seconded the motion. The minutes were approved as presented.**  
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2 **VI. Old Business**

3 **a. Written Reports.**

4 **➤ NNMCAB Chair's Report**

5 A printed copy of the Chairs Report was included in the meeting packet and a copy may  
6 be obtained by request from the CAB office at (505) 989-1662. Mr. Phelps asked for questions  
7 or comments on the written reports; the intent was for the reports to be submitted in writing;  
8 questions could be brought up in this section or later. Mr. Phelps briefly reviewed the main  
9 points in his Chair's report.

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11 **➤ NNMCAB Executive Director's Report**

12 A printed copy of Ms. Santistevan's report was included in the meeting packet and a copy  
13 may be obtained by request from the CAB office at (505) 989-1662. Ms. Santistevan stated  
14 that the May 12 and 13, 2010 Board Retreat and CAB meeting was scheduled to be held at the  
15 Ohkay Owingeh Pueblo Hotel. She asked the Board to note that the CAB Calendar has been  
16 updated with all the 2010 board and committee meeting information. Additionally, Ms.  
17 Santistevan informed the group that updated CAB directories have been issued. She asked the  
18 members to check their information to make sure it was correct. As a reminder, Menice also  
19 asked the members to email her if they wanted to attend the December 2, 2009 LANL tour for  
20 CAB members. Mr. Phelps encouraged Board members to attend the very informative tour,  
21 which was especially helpful to new members. Mr. Bishop also encouraged members to attend  
22 this tour, which was a special tour normally reserved for elected officials.

23 Mr. Baston asked the Board to consider the idea of a social event over the festive season  
24 for the CAB. Mr. Casalina mentioned that if the get together was considered a meeting, then  
25 the event would have a Federal Advisory Committee Act (FACA) requirement to be posted in the  
26 Federal Register in advance. Mr. Phelps stated this was an idea the board could consider and  
27 he suggested board members talk during the break.

28 Ms. Mason requested more discussion and possibly presentations on other Material  
29 Disposal Areas (MDAs) in addition to Technical Area (TA) TA-54 and TA-21. Ms. Mason wanted  
30 to see a presentation on all the major clean-up activities at the Lab. Mr. Phelps stated a lot of  
31 what the board looked at revolved around the Schedule of Deliverables in the New Mexico  
32 Environment Department's Order on Consent (Consent Order or Order) that was a regulatory  
33 driver for the clean-up work at the Lab. Mr. Worth said the groundwater presentation  
34 scheduled for later in the meeting would touch on many of the sites, which would provide an  
35 overview. Mr. Worth also stated there was a lot of remediation work occurring at the Lab, with  
36 860 sites, many were in active stages of investigation and remediation. Mr. Worth announced  
37 he would be pleased to provide the board with an overview presentation.

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40 **IX. New Business**

41 **a. Matters from Co-DDFOs Ed Worth and Lee Bishop**

42 Mr. Worth announced that two responses to CAB recommendations have been received  
43 from the DOE. Mr. Worth reviewed the responses for both recommendations. Full text of both  
44 CAB recommendations to DOE and DOE's response can be found on the CAB website at:

1 [www.nnmcab.org](http://www.nnmcab.org).

2 **1. Recommendation 2009-04, "Priorities for American Recovery and**  
3 **Reinvestment Act Stimulus Funding for Environmental Cleanup at Los**  
4 **Alamos National Laboratory."**

5 In this recommendation the NNMCAB recommended (1) that LASO utilize available  
6 stimulus funds to ensure adequate training of workers and monitoring of site conditions to  
7 provide the public with information demonstrating safe conditions for workers and the public  
8 during the proposed cleanup operations at TA-21. (2) The NNMCAB stated their agreement  
9 with the priorities developed by LASO for the removal of buildings and facilities at TA-21 and  
10 the excavation and removal of legacy waste remnants from MDA-G as an initial use for a  
11 majority of the stimulus funds for LANL. (3) Additionally, the CAB recommended that LASO  
12 show immediate and excellent progress in the beneficial use of available stimulus funds so LASO  
13 and the NNMCAB may recommend to the DOE Office of Environmental Management that LANL  
14 was deserving of additional stimulus funding to further accelerate the cleanup of legacy waste  
15 at our site.

16 DOE's response concentrated on key points in the recommendation regarding training of  
17 workers and selection of priorities for funding. The URL for information about ARRA initiatives  
18 at LANL can be found at the following web location:

19 <http://www.lanl.gov/environment/cleanup/stimulus.shtml>.

20 Dr. Campbell asked if LANL would be eligible for any additional funding. In response to  
21 Dr. Campbell, Mr. Bishop informed the members that he had recently attended a Transuranic  
22 Waste (TRU-Waste) Conference where he gathered information that some of the other sites  
23 were not performing as well with their ARRA initiatives. Mr. Bishop informed the group that Dr.  
24 Triay was considering directing some additional funds to the Waste Isolation Pilot Plant (WIPP)  
25 in Carlsbad, New Mexico and also to LANL. Mr. Bishop was working on negotiating an  
26 additional 20 to 30 million, but all this information was still in draft form. He did state that LANL  
27 had been performing well and was second in Tru Waste shipments in the complex.

28 **2. Recommendation 2008-01, "Recommendation to DOE and LANL to Expedite**  
29 **Planned Change Request for Shielded Containers."**

30 The intent of this recommendation is to encourage DOE to provide strong support for  
31 using shielded containers for removal of Remote Handled Transuranic Waste (RH TRU) waste,  
32 so that the TRU wastes from LANL Area G can be removed on schedule. The effect of using  
33 shielded containers to transform RH TRU containers into Contact Handled (CH) TRU containers  
34 will greatly increase the efficiency for removal, transport and disposition of the TRU waste.

35 DOE's response was one of agreement. The response stated that, "the LASO EM  
36 program can use this NNMCAB recommendation to bolster its position in using lead shielding for  
37 radioactive RH waste management activities when working with disposal sites and regulators  
38 including the EPA." The response went on to further describe plans currently in formation  
39 "regarding the disposition of the remainder of the RH-TRU being stored at W Area G. The plan  
40 is to protect site workers, environmental and public during retrieval, repackaging and shipping  
41 through the use of temporary shielding, packaging (e.g. containers) and shipping casks to  
42 reduce potential exposures to higher radiation levels." DOE agreed to update the CAB on its  
43 progress. Mr. Bishop apologized for the delay in response to Recommendation 2008-01  
44 because now WIPP can receive shielded containers and lead can be used as long as the lead

1 was used for shielding, DOE has been investigating using shielded containers and they use  
2 some already contaminated lead by reusing the contaminated lead as a shield.  
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5 **Matters from the Co-DDFOs continued:**

6 Mr. Worth noted that there was no facilitator today. This meeting was self-regulating and  
7 if the Board functioned effectively then it conduct future meetings without a facilitator. Ms.  
8 Mason commented that in her opinion the group did not need a facilitator and she considered a  
9 facilitator to be superfluous and expensive. Additionally, Ms. Mason stated it was not noted  
10 anywhere in the bylaws that the Board was required to have facilitation. Mr. Gallegos stated  
11 the board could formally recommend to not retain a facilitator for its meetings. Mr. Gallegos  
12 thought a facilitator tended to get in the way of the board Chair running the meeting. Mr.  
13 Casalina stated DOE had made an extensive search for a "professionally certified" facilitator  
14 without finding exactly what they were looking for, which has become a stumbling block. Mr.  
15 Baston agreed with Mr. Gallegos and he would support a recommendation against engaging a  
16 facilitator. Ms. Henline said she has facilitated many meetings and a friendly addition to the  
17 recommendation would be to invite folks to speak up. Mr. Phelps welcomed everyone to  
18 participate and use the tent cards to not only speak up for themselves but to inquire as to what  
19 other member's opinions were. Ms. Henline wanted the Co-DDFOs to report back to DOE  
20 headquarters that the board preferred not to have a facilitator and that this meeting ran well,  
21 on time and smoothly. Mr. Maestas said the idea of a facilitator was not needed. Mr. Maestas  
22 was also against homogenizing the SSAB websites.

23 Mr. Maestas asked about the status of the Performance Analysis (PA) for Area G? Mr.  
24 Bishop stated the current thinking was to not dig everything up and remove all the waste from  
25 the site. There were plans to leave some of the waste in place. DOE has approved a 10,000-  
26 year model and they are ready to present this analysis to the board as early as March of 2010.  
27 Mr. Bishop was interested in getting the CAB's opinion on location and target audience, whether  
28 to have two presentations, one aimed at the general public and one more specifically for the  
29 CAB. Mr. Bishop asked the board for feedback. Ms. Mason stated she thought two meetings  
30 would be better than a combined meeting. Ms. Mason also requested access to a copy of the  
31 PA for review. Dr. Campbell thought this was a very important document, one that the CAB  
32 should endeavor to study and understand. It was essential public information currently and for  
33 the future. Due to the complex nature of the document, Dr. Campbell thought study would be  
34 required to understand the PA as this document served as the basis for leaving some of this  
35 waste in place, perhaps in perpetuity. Ms. Henline suggested the members look back at  
36 NNMCAB Recommendation 2005-10 regarding the Board's recommendations on the expansion  
37 of Area G.

38 Mr. Bishop stated the National Nuclear Security Administration (NNSA) mission continued  
39 after the Consent Order was closed and finished. There has been discussion about opening a  
40 new waste cell at Area G. Weighing in on the topic would be something within the scope of the  
41 Board's mission; a good subject for the CAB to follow-up on. Dr. Campbell referenced the 1999  
42 LANL Site Wide Environmental Impact Statement (SWEIS), which included an approval for the  
43 expansion of Area G. He noted, the CAB has asked for information about the PA previously; it  
44 was a long-standing request.

1 Mr. Baston also wanted to see the ideas brought to both the public level and the  
2 technical level. Mr. Bishop stated that the presentation was already written and was specifically  
3 developed for the general public. Ms. Henline wanted more information on the nature of the  
4 waste currently at the site. Mr. Bishop said this could be a presentation item for the Waste  
5 Management Committee. He explained the waste in question was already buried except for one  
6 open cell. There was a testing process for Remote Handled (RH) waste removal. Mr. Bishop  
7 explained there were variables in removing buried waste because, as an example maybe the  
8 pipe containing the waste would have rusted underground and might break during excavation.  
9 How much do they really know about the buried waste removal? Mr. Bishop stated the records  
10 were good for inventory. Yet he agreed with Mr. Villarreal in that EM remediation work has  
11 uncertainty- until one excavates the waste- that's part of the balance of the risk of moving the  
12 waste or leaving it in place. Mr. Bishop, speaking as the Waste Management Manager for Area  
13 G, wanted, as a mandate, to send most of the waste off site and what waste would be left on  
14 site would be very limited. He suggested the ratio of waste left at the site or removed was  
15 another important area for which the CAB could make recommendations.

16 Rev. Gilchrist knew the pits used for waste burial at Area G were unlined and there was a  
17 current debate about Evapotranspiration. The board may request a presentation on this  
18 concept too. Mr. Bishop stated if the cells are lined they collect water but unlined cells  
19 evaporate the perspiration. Rev. Gilchrist saw a full-page article in the New Mexican this week  
20 about the Sandia Lab's situation with waste stored there in unlined pits. She said the article  
21 described the public as reacting with concern and fear in Albuquerque.

22 Mr. Phelps wanted to see what the risk criteria was for the decisions made in the PA. Mr.  
23 Maestas thought the monitoring would go on forever and there was no such thing as an open  
24 ended cost project. Mr. Baston also talked about the cost of remediation, soft cost verses hard  
25 cost, soft was research and hard was the actual work. He wanted to see he ratio to be 40/60  
26 and he wanted this budget information included in presentations. Mr. Villarreal asked if the Lab  
27 had the capability to conduct this long-term remediation? Rev. Gilchrist stated when one  
28 speaks of cost, that there were considerations that go beyond the actual work of the project;  
29 one has to consider health care costs etc; and she would weigh the thought of actual "hard"  
30 cost with cost to environment and to the people.

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**b. Consideration and Action on NNMCAB Annual Evaluation Report**

33 Ms. Henline provided a review of the board's annual survey and the results from the  
34 survey. Overall, the survey provided positive feedback from the members, much of the issues  
35 brought to light in last year's survey had been worked on and improved this year. For example:  
36 incorporating new board member orientation and mentoring opportunities. This year the level  
37 of Board member participation was determined to be very good. The increased support from  
38 DOE this year was a noted improvement. It was also noted that DOE was improving on its  
39 response time to Board recommendations.  
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41 Mr. Phelps thought it was important to go over the results of the survey with the whole  
42 board. He thanked Ms. Henline for stepping forward to take the lead on the project. Mr.  
43 Phelps commended Ms. Henline on a job well done.

44 Mr. Phelps asked for feedback on meeting places and schedules. He asked if this issue

1 was a high priority based on the survey results. Mr. Baston thought that the CAB was becoming  
2 more cohesive and that the current meeting times and places were satisfactory. Ms. Gutierrez  
3 stated that it was hard for people to come during work and it was hard to plan around ones  
4 home and family schedules to attend evening meetings as well. She thought knowing the  
5 meeting times in advance allowed one to plan around work and home life. The key was making  
6 it a priority to attend the meetings and it was equally hard to regardless of changing meeting  
7 times or locations. Mr. Baston mentioned looking into the idea of "open software" on a  
8 computer so that more people could join the meetings. Ms. Mason was a strong advocate of  
9 varying the meeting locations. Mr. Villarreal stated he had difficulty driving at night and he  
10 preferred if the meetings were not held in the evening. Mr. Casalina was available to hear any  
11 additional feedback from the board on the issue of meeting locations and times.

12 **Dr. Campbell thanked Ms. Henline for putting the annual self-assessment**  
13 **survey report together and he moved that the board accept the report and approve**  
14 **its submission to the DOE. Mr. Baston seconded the motion. The motion to approve**  
15 **was passed by unanimous vote.**  
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### **VIII. Open Forum for Board Members**

18 Mr. Phelps announced the open forum section of the meeting, which was a new section  
19 for the board meeting agendas. This new section was where members could bring up any  
20 relevant topic that they wanted. The time allotted for the open forum was thirty minutes.

21 Mr. Baston brought up an old business item. He asked what happened to the  
22 recommendation that Dr. LaGattuta was working on regarding recommending DOE conduct a  
23 public survey. Mr. Phelps stated it was decided under the recommendation evaluation  
24 procedures that the draft was determined to not be within the mission of the CAB. Mr. Bishop  
25 clarified that the recommendation was considered to be out of scope because it referenced the  
26 whole Lab, and the work of this CAB was required to stay within the framework of the  
27 Environmental Management (EM) mission as set forth in the Board's charter.

28 Dr. Campbell brought up the topic of disposal and expansion of Area G for Low Level  
29 Waste (LLW) disposal. With a lot of the demolition currently ongoing, there was a need for LLW  
30 disposal. Dr. Campbell's concern was having an unlined waste disposal pit uncovered during  
31 the time period it was being filled up. He thought the evapotranspiration theory did not work  
32 for the bottom of an open, unlined landfill. He explained the rainwater collects in the bottom of  
33 the pit and can form leachate that can migrate. He believed the mesa tops breath through the  
34 joints, and contrary to some comments, Dr. Campbell had seen evidence that these  
35 contaminated constituents have been found at about 500 feet below the mesa top, which was  
36 about half way to the water table. He wanted the DOE to consider collecting and treating the  
37 run off and to dispose of it to reduce the potential for more infiltration. Mr. Baston added that  
38 monitoring needed to be under the deep end, and underneath the pit in addition to the  
39 parameter and cross sections. Mr. Sean French provided a presentation to the Board on this  
40 topic, which Mr. Bishop suggested could be revisited. Mr. Bishop also responded by stating that  
41 the DOE was continuing to study the disposal cell; he has seen liners that acted like a bathtub  
42 that actually injected waste into the landfill, he is not opposed to liners but they needed to be  
43 the right solution. LANS already conducted pollution prevention with storm water run off where  
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1 water was removed continually from Area G. Mr. Bishop explained that Area G was not a  
2 standard landfill. All of the waste currently stored at Area G was containerized and the  
3 container performance was good, leachate and rusting during the 10-year cycle was not an  
4 issue. Rather the issue was with long-term storage and determining what will be left in place  
5 for longer periods of time. There was some issue about how much water was pumped out and  
6 treated at the Liquid Waste Facility. Mr. Phelps said they could ask Mr. Sean French to make a  
7 presentation to the sub committee. Dr. Campbell reiterated his request for a liner was during  
8 the period of open operation for the landfill.

9 Mr. Pacheco addressed the meeting locations and hours; he was fortunate that his  
10 managers allowed him to come to meetings during working hours. He also was a member who  
11 drove from Taos to attend meetings. For him, the drive was not bad and the hours were not  
12 bad; he was content with the current setting and times.

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15 **IX. Presentation - LANL Groundwater Monitoring System (Existing and New**  
16 **Wells) with Mr. Danny Katzman, LANS**

17 Mr. Danny Katzman, LANS provided the board with a subject matter presentation on the  
18 LANL Groundwater Monitoring System, which covered existing and new wells. Mr. Katzman  
19 answered questions throughout the presentation. Mr. Katzman's PowerPoint Presentation has  
20 been placed on file. The presentation provided the board with an overview of groundwater and  
21 groundwater projects at LANL, which focused on the groundwater zones at LANL, including the  
22 alluvial, perched-intermediate, deep or regional and the hydraulic connection known to exist  
23 between zones. Mr. Katzman discussed existing and planned intermediate and regional wells.  
24 He provided a generalized perspective on regional groundwater contaminants by area. Mr.  
25 Katzman described the special studies that were underway to determine contaminate nature  
26 and extent. The Lab was working with the Pantex site to see if they could incorporate some of  
27 the lessons learned at that site. They were working on the network configuration, which was a  
28 carefully studied process, as they did not want to be inadvertently adding into the system. The  
29 monitoring network was not only the wells but the network was a composite or an aggregate of  
30 composites, there were looking holistically at the whole network and they wanted the wells to  
31 perform synergistically. He discussed criteria for how monitoring objectives were met that  
32 included: physical quality/well construction, geochemical performance/data quality coming out  
33 of the well- was it sufficient to meet site-specific objectives and lastly, was the location of wells  
34 correct? Conceptualized infiltration windows made from site data was the best depiction of  
35 where contaminants could be found, and if they could or would break into the regional. By  
36 using modeling based on groundwater gradient and geologic controls; this information helped  
37 to provide nature and extent of contamination, which supported Resource Conservation and  
38 Recovery Act (RCRA) requirements.

39 Mr. Katzman explained the ongoing work at TA-54: seven wells are currently scheduled.  
40 The goal was to further characterize the perched, intermediate and regional aquifer.  
41 The most important point here was to understand contaminant nature and extent to determine  
42 remedies at TA-54 and other areas. The new wells are planned to have two screens, which  
43 would provide a lot of good 3-dimensional information. A work plan for the new wells has been  
44 submitted to NMED and approved.

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3 **X. Public Comment Period**

4 A public comment period was scheduled for 6:00 p.m. Mr. Phelps opened the floor for  
5 public comment. No one signed up to speak.  
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8 **XI. Presentation on Remote Handled 33 Shafts at Area G by Robert Villarreal**

9 Mr. Bob Villarreal, CAB member, provided a subject matter presentation on the contents  
10 of the waste stored in 33 shafts at MDA-G. Mr. Villarreal's written presentation materials have  
11 been placed on file and are quoted below. His presentation focused on the typical waste forms  
12 found in the 33 shafts, and the products produced from degradation of waste with study on  
13 how to remediate the area; whether to excavate the waste or leave the waste in place or to  
14 recommend a combination of both alternatives.

15 Dr. Triay asked a group of scientists to review the 33 shafts at TA-54 of which Mr.  
16 Villarreal was involved. One of the first things they learned was how hot these cells were, (see  
17 Mr. Villarreal's notes below for inventory) so hot in fact that much of the waste would need to  
18 be Remote Handled (RH). The waste was, however, short lived compared to waste stored in a  
19 long-term waste repository. The manual for working with this waste was CCP-TP-500; Mr.  
20 Villarreal's group had to comply with the 13 waste parameters listed in Attachment One of the  
21 manual throughout their study.

22 Initially, Mr. Villarreal called Mr. Neil Weber, Director, San Ildefonso Pueblo Environment  
23 Department. He asked Mr. Weber what were the neighboring Pueblo's wishes regarding  
24 disposition of the waste in question. Mr. Weber relayed that what the San Ildefonso Pueblo  
25 wanted ideally was to have all the waste removed, but if the risk were greater to transport the  
26 waste out then they would understand that too, which seemed to be a carefully worded  
27 response from the Pueblo.

28 Mr. Villarreal's group studied the waste itself and developed many different scenarios for  
29 removing the waste. For example: they considered using a shield to lift the shafts out. All 33  
30 shafts were supposed to be surrounded by cobblestones and gravel but it turns out that the  
31 method was not consistent and just the first step of lifting the pipes, that lined the shafts, out  
32 of the ground brought about many additional difficulties to consider. Mr. Villarreal investigated  
33 alternatives including using a remote handled system.

34 Mr. Villarreal explained a very complex system to characterize and repackage the waste  
35 using an existing Hot Cell Facility. He explained loose waste was one scenario and  
36 containerized waste was another because the waste in containers needed to be additionally  
37 characterized and be repackaged, and being very hot waste made the characterization process  
38 much more difficult overall. Without the use of an existing Hot Cell Facility, they really did not  
39 have a viable path forward for the waste, which meant they might be stuck with leaving the  
40 waste in place. In situ vitrification was also considered but Mr. Villarreal thought that this  
41 option would not be a workable solution as it would take up to two years for the encapsulated  
42 waste to cool down. Mr. Bishop stated in addition to the very hot waste, there were 44,000  
43 drum equivalents that were contact handed waste. One consideration was, if the Los Alamos  
44 Molten Pu Reactor Experiment (LAMPRE I) had to be removed from the site, by regulatory

1 requirement, then the thinking was, why not remove the contents of the other 32 shafts as  
2 well?

3 Mr. Villarreal and Mr. Bishop thought a recommendation from the CAB regarding the  
4 disposition of the waste in the 33 shafts at MDA-G would go a long way to help get some  
5 momentum and possibly more funding back into this project.

6 Mr. Baston thought a formal risk assessment for each shaft was needed. Mr. Villarreal  
7 stated the later shafts would be the easiest to remove and could have a reliable risk  
8 assessment. Mr. Bishop stated the shafts contain very hot waste and the worker risk was great  
9 but in 200 years most of the hot waste will have cycled through its half life, which supported  
10 the idea of leaving the waste in place until there was less risk to workers, the public and the  
11 environment by moving the waste off site. Mr. Rael said that budget has been an issue. Mr.  
12 Phelps asked the difference in price between using the existing hot cells verses some alternative  
13 and he suggested if one of the shafts was set to be remediated then why not all thirty three?  
14 Hot cells were designed to handle radiation; with thick leaded glass windows and Hot Cell  
15 Facilities were designed to national standards. LANL currently has a limited amount of hot cells  
16 that measure 6'x6' by 8'x8', with robotic arms.

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17  
18 *From Mr. Villarreal's' notes:*

19 **'Typical Waste Forms And Parameters In 33 Shafts:**

- 20 1. 19 of 33 Shafts has RH-Waste that is >1000 R/hr contact.
- 21 2. Only 10 Shafts have radiation levels of >100 R/hr @ 1 meter.
- 22 3. Most Mixed Fission Products (MFP) activity Cs-137 and Sr-90.
- 23 4. There were about 1900 Ci of MFP (2009)
- 24 5. Cs-137 activity consists of  $\beta$ - $\gamma$  (662 KeV) with  $T_{1/2} = 30.1$  yr.
- 25 6. Sr-90 is a pure  $\beta$ -emitter with associated bremsstrahlung (braking) radiation with a  $T_{1/2} =$   
26 28.2 yr.
- 27 7. There is a total of 1.537 Kg Pu (127.3 Ci) in 33 Shafts.
- 28 8. There is a total of 193 packages of waste in 33 Shafts ( $\sim 27$  m<sup>3</sup>).
- 29 9. Shaft #212 has the Los Alamos Molten Pu Reactor Experiment (LAMPRE I) that contains  
30 200 gm of Pu and weighs 7274 lbs.
- 31 10. CCP-TP-500 is the governing document for disposal of RH-waste materials.
- 32 11. According to CCP-TTP-500, Table I, each waste item must be examined and recorded  
33 with its Waste Material Parameters (There are 13 WMPs listed in CCP-TTP-500,  
34 Attachment I.)
- 35 12. We must establish the presence/absence of any prohibited items according to CCP-TTP-  
36 500.
- 37 13. There is a radiation limit of 1000 R/hr per packaged waste item.
- 38 14. Typical waste items
  - 39 ▪ SS and fuel cut remains
  - 40 ▪ Waste fuel cladding
  - 41 ▪ Grindings
  - 42 ▪ Hot Cell trash
  - 43 ▪ Swipes
  - 44 ▪ Fuel Contaminated Waste and Trash

- 1       ▪ *Fuel contaminated waste cans*
- 2       ▪ *Met samples that contain fuel (Only fuel in waste)*
- 3       ▪ *Plastic cans, trash, plastics, paint, wipes, glass, etc.*

4    15. *Waste dump history*

- 5       ▪ *1971 to 1973 Waste dumped in unlined shafts*
- 6       ▪ *1979 to 1987 Waste dumped into lined shafts*
- 7       ▪ *1990 and forward---Waste in welded steel containers dumped in lined shafts"*

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9    **Conclusion To "Alternative Solutions: Remote Handled Waste In 33 Shafts At Ta-54"**  
10 **By Deborah Bennett and Bob Villarreal, PMT-1, November 6, 2006:**

11       *"The transient Hot Cell System (THCS), we proposed, including hot cell*  
12 *shielding blocks, manipulators, two or three main hot cells with 2 or 3*  
13 *feed hot cells, specialized remotized equipment, overall enclosure, and*  
14 *underground transfer and storage cells would be quite complex, but I*  
15 *believe it might provide an alternative means for characterizing and*  
16 *eventually packaging for shipment to WIPP the RH waste from the*  
17 *shafts with loose waste. To address the shafts with containerized*  
18 *waste would require at least 1 or 2 additional hot cells with installed*  
19 *automated lathe or cutting capability for opening the metal canisters.*

20       *Recognize that construction of this complex and multi-component*  
21 *THCS according to today's nuclear facility standards would be very*  
22 *extensive and that higher risk of accidents/incidents should be*  
23 *expected. I believe that the saving in time and money may be far less*  
24 *than expected. If an industrial or radiation safety accident were to*  
25 *occur, it could shut down the entire TA-54 area for a considerable*  
26 *amount of time. I would certainly not want to defend why the safety*  
27 *to the workers, environment, and system was compromised*  
28 *attempting to save what might in the long run be a small amount of*  
29 *money by depending on an unproven THCS that would have to be*  
30 *decontaminated and disposed of rather than using a proven and tested*  
31 *existing Hot Cell Facility. To consider this proposed mobile facility for*  
32 *disposition of the RH waste in the 33 shafts at this time would show*  
33 *that we (LANL and DOE) does not now have a viable path forward for*  
34 *this mixed waste which is against all protocols we have had to comply*  
35 *with in the past. (As long as the CMR Hot Cells were available, we had*  
36 *always maintained that we had a path forward).*

37       *Therefore, I do not recommend the seemingly achievable, but*  
38 *highly risky, alternative approach we have investigated and*  
39 *presented."*

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42 **XII. Year End Report with Michael Graham (LANS)**

43       Mr. Michael Graham, LANS, provided comments to the Board and answered Board  
44 member questions. Mr. Graham provided a PowerPoint Presentation, which accompanied his

1 report. The PowerPoint presentation has been placed on file. Mr. Graham described EM project  
2 accomplishments: number one accomplishment was stated as positive and safe waste  
3 movement, even with the volume of waste moved dramatically increased, second only to the  
4 Idaho site. Another accomplishment was twenty Groundwater wells were installed at LANL.  
5 The last year has shown much ARRA progress at TA-21 and in the demolition of cold war era  
6 buildings. An integrated project team has been working on the Recovery Act Initiatives. Mr.  
7 Graham reported that 211 jobs were created or saved through the Recovery Act. Baseline  
8 funding has been set aside from projects that have received ARRA Funding. Mr. Graham invited  
9 the CAB to attend a demolition of buildings at the TA-21 site on December 2, 2009.

10 Regarding their progress on meeting the Consent Order deliverables, Mr. Graham stated  
11 that compliance was key. Last year, 231 deliverables were submitted. Process improvements  
12 have been made to ensure continued compliance with the Order. Mr. Graham was looking at  
13 overall organization by area closure, TA-21 closure, TA-54 closure and everything else grouped  
14 together. Closure and stewardship of the areas was being managed as an integrated effort and  
15 scope would be determined by the three area projects. Mr. Graham asked the CAB to consider  
16 the big picture and look at the end states for the whole area when considering  
17 recommendations.

18 Mr. Graham stated LANS was on solid footing as they moved ahead. Every September  
19 he looked at the budget for next year, it was tight and they continually work to find ways to  
20 efficiently complete projects. However, Mr. Graham stated they were better off with their  
21 budget than in years past and they have ARRA Funding and they could possibly see more ARRA  
22 Funding. They were concentrating on a holistic approach and they were committed to  
23 transparency throughout the process.

24 The first priority though was always worker safety, protecting public and the environment  
25 while remaining in compliance when delivering on commitments through efficient and effective  
26 operations all with a policy of openness and transparency; this was LANS and DOE's  
27 commitment to the public.

28 Dr. Campbell wanted to schedule time with Mr. Rael and Mr. Graham to discuss budget  
29 priority. Mr. Rael talked about the budget cycle and he stated April 2010 would be a good point  
30 to get together with the CAB's Ad Hoc Budget committee but they could begin preliminary  
31 discussion as early as January 2010.

32 Mr. Phelps asked to see a video of the TA-21 building demolition. Mr. deSousa stated  
33 they would have both video and still photography from the demolition and the CAB would be  
34 welcome to view the footage.  
35  
36

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### **XIII. Meeting Feedback**

37 Mr. Phelps asked for meeting feedback from members.

- 39 ➤ *Ms. Santistevan congratulated Mr. Phelps on a very effective meeting. She*  
40 *also thanked the CAB staff.*
- 41 ➤ *Ms. Gutierrez thought it was a good meeting with good presentations.*
- 42 ➤ *Mr. Loya liked Mr. Villarreal's presentation on the 33 shafts and Mr. Katzman's*  
43 *water presentation.*
- 44 ➤ *Mr. Graham appreciates the Board members as volunteers.*

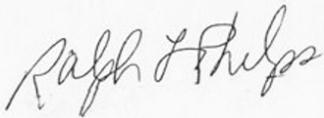
- Mr. Rael appreciated the presentations and the member's interaction.
- Mr. Pacheco appreciated the hospitality.
- Mr. Gallegos gave a thank you to Mr. Phelps for a well-run meeting. He was pleased hear about the structures to retain sediments. Mr. Gallegos believed this type of work has a real impact to public health.
- Rev. Gilchrist thanked Ms. Henline for being her board mentor.
- Ms. Henline thought Mr. Phelps proved his worth as Chair and facilitator.
- Mr. Casalina stated good job to all.
- Mr. Worth would report to Ms. Brennan, DOE/HQ that the meeting went well and he thanked everyone for volunteering their time.
- Mr. Bishop thought people did a good job with explaining acronyms. There was a lot of great dialog and discussions at the meeting. He looked forward to a very positive new year. He offered a field trip to Sandia Canyon and reiterated the invitation for the CAB to attend the TA-21 demolition ceremony on December 1, 2009. Mr. Bishop wished everyone a Happy Holiday!

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**XIV. Adjournment.**

With no further business to discuss, Mr. Bishop, Co-DDFO adjourned the meeting at 8:12 p.m.

**Respectfully submitted,**



**Ralph Phelps, Chair, NNMCAB**

***\*Minutes prepared by Lorelei Novak, NNMCAB Technical Programs and Outreach***

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**Attachments:**

1. **Final 11-18-09 CAB Meeting Agenda.**
2. **Report from Ralph Phelps, Chair, NNMCAB.**
3. **Recommendation Process Arrow Flow Chart Handout.**
4. **Report from Robert Gallegos, Vice Chair, NNMCAB.**
5. **Report from Menice Santistevan, Executive Director.**
6. **Report from Gerry Maestas, Chair, WM Committee.**
7. **DOE Response to Recommendation 2009-04, "Priorities for American Recovery and Reinvestment Act Stimulus Funding for Environmental Cleanup at Los Alamos National Laboratory.**
8. **DOE Response to Recommendation 2008-01, "Recommendation to DOE and LANL to Expedite Planned Change Request for Shielded Containers."**

- 1 9. "LANL Groundwater Monitoring System (Existing and New Wells)" PowerPoint  
2 Presentation by Danny Katzman.  
3 10. Robert Villarreal's Transparency Copies from Presentation on Description of  
4 Contents of 33 Shafts at LANL Area G.  
5 11. "LANL Environmental Programs Fiscal Year 2009 Recap" PowerPoint  
6 Presentation.  
7
- 

8  
9 **Public Notice:**

10  \*All NNMCAB meetings are recorded in accordance with the Federal  
11 Advisory Committee Act. Audiotapes have been placed on file at the  
12 NNMCAB Office, 1660 Old Pecos Trail, Suite B, Santa Fe, New Mexico,  
13 87505.

14  \*Reference documents listed in the Appendix section of these  
15 minutes may be requested for review at the CAB office in Santa Fe.  
16

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17 \*For more information regarding audio transcription or any information  
18 referenced to or contained here in these minutes, please call the CAB  
19 office at (505)-989-1662.  
20